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* * [After the foregoing pages were in print, the following valuable illustration on the subject of Irish water-mills was received from Dr. O'Donovan. As it gives the original of the passage already quoted from "Cormac's Glossary," fully elucidated by the learned Doctor's notes, it is here inserted.]

"Պլեն, .i. mol ocur օն ; օն, .i. cloč : արբեժ ծըժե իր մլեն
 և մլեն ; ո, մոլան. .i. մո և ար, .i. մո և լոճա զամ լոճա երն.
 Պլեն ծը, .i. mel ocur կն, ար իր բոր կն մելի."

Muilenn, i.e., *mol* (*a*) [shaft] and *ond*, (*b*) i.e. stone, for these are the two most important things in a mill; or, *moland* i.e. *mo-a-aíl*, i.e. greater its stones than the stones of the *Bro* (*c*) [hand-mill]; *Muilennu* also i.e., *mel* [grind] and *linn* (*d*) [stream] because it is on the stream it grinds.

THE GIGANTIC IRISH FOSSIL DEER.

BY ROBERT CANE, ESQ., M.D., M.R.C.S.I.

[Read at the Meeting of May 1st.]

I beg to present to the museum of the Archæological Society, some bones of the *Cervus Megaceros Hibernicus*, or Irish fossil deer. The bones consist of four *vertebræ*, and the bones of the hind extremity of the left side. I have secured them with wires. Those of the hind leg consist of the *femur*, the *tibia* two bones of the *tarsus*, being the *os calcis* and *astragalus*, the metatarsals, and three bones of the foot. Some of the smaller bones, as the knee-cap and hoof, are wanting; but the outline and enormous length of the limb are well shewn in the eight bones which are fastened in their relative places. The bones were sold to me last summer by a peasant, who stated that the entire animal, as he believed, had been found in some drainage excavations then being made in the neighbourhood of Garryricken. He informed me that the head and horns, as he called them, had been sold at Garryricken House, and

(*a*) *Mol* is still the living and common word for a mill-shaft. It is curious that no allusion is here made to the *roth* [*rota*] or wheel; and it is quite clear that the mill which the author of the Glossary had in view was the *Muilleann toin re talmhain* [podex ad terram], which was driven by a *running* stream. It was turned by *oirchels*, or paddles attached to the shaft, which the running stream turned.

(*b*) The word *ond* is now obsolete, but it is explained here and elsewhere in Cormac's Glossary by *cloch* [stone], which is still a living word.

(*c*) *Bro* is still the living word for a quern or hand-mill, in Ireland and Scotland.

(*d*) *Linn* now signifies a *pond*, but it is frequently used in old Irish MSS. for a running stream. It is curious that it did not occur to Cormac to derive it from the Latin *mola*, or *molendinum*.

that the rest of the bones were in the neighbourhood, and which he promised to bring in to me ; but, though I offered to pay liberally for them, he never returned to me.

It is greatly to be deplored that a skeleton, which there is every reason to believe was complete, should be thus scattered and lost, the more especially as the animal must have been—judging from the specimens sent—of the largest size, larger than that at Edinburgh, and fully as large as that in the Royal Dublin Society's collection, and which has been so beautifully articulated, and admirably described by Dr. Hart, of that city. These animals' remains are of peculiar interest to Irishmen, being found so constantly in this country, as to have taken the prefix of "Irish," though occasionally found in Great Britain and elsewhere ; while, in the geological world, they rank with the Mammoth and Mastodon, and animals presumed to have inhabited those countries in which they have been found, previous to man's appearance in them. Various conjectures have been offered on this subject, and Professor Jamieson considers that he has found conclusive evidence in a rib that he has examined, and in which he found an open which he considers to have been produced by an arrow or dart ; but, from the difficulty experienced in perforating the bones now sent, when articulating them, I should doubt if any arrow or projectile, short of fire-arms, could penetrate those bones ; the more especially when they were covered with a hide such as this animal must have worn. The texture of the bones is exceedingly dense and strong, so much so, as now, after having lain in the earth for thousands of years, to be yielding to time only at points where the cellular structure of all bone is usually large, and therefore most liable to decay. And its extreme hardness is not caused by fossil change, for the term does not appear to be strictly correct, as the bones are not in the fossil state ; on the contrary, wherever time has told on them, it has been, as in all things, to destroy. I would, therefore, have great doubts that the aperture described by Professor Jamieson, had been caused by a wound, while it is equally remarkable, that no mention is made of such an animal in any of our most ancient manuscripts, or in the traditions of the country ; and it could not have escaped such sources of history, if it had been in Ireland within the last two thousand years. Its enormous height, ten feet—its huge antlers, twelve feet wide, equal to the animal's own length, and occupying a front space wide as that taken up by a file of eight soldiers—would have secured it sure remembrance in the traditions and ancient records of the country. There can be little doubt but that the animal was, at least, antediluvian.

In "Boate's Natural History of Ireland," Dr. Molyneux gives us the earliest essay we have on the subject of these remains, and informs us of heads and antlers sent out of Ireland as presents into England, to William III., and Charles II., the latter by the Duke of Ormonde. But the most erudite and valuable accounts of these remains will be found, with suitable engravings, in Dr. Hart's essay, published in the Transactions of

the Royal Dublin Society about twenty-six years ago,* and in Jamieson's edition of Baron Cuvier's Theory of the Earth. Though the *Megaceros* seems to have disappeared before human traditions and records were made of such things, it is yet evident that Ireland was long inhabited by animals of the deer species; and Sir William Betham has given us, in his drawing of the ancient arms of Ireland, as copied from a manuscript of the period of Henry VIII., a beautiful deer *couchant*. A print from it may be seen in the "Irish Parliamentary Gazetteer," lately published by Fullerton.

I regret I have but these few remnants to send to the Society, and feel how desirable it would be if those who may have the other scattered remains, would see and have them united in some one place. I have no doubt they are distributed into several hands, and, by their imperfection, lose the value they would possess if united.

The limb sent, measures four feet eight inches, without the hoof; so that, taking the hoof and the absent cartilages into account, it must have measured over five feet from the head of the thigh bone to the extremity of the hoof.

In connexion with the foregoing paper, it may be useful, as well as interesting, to quote here the opinion of the able English geologist, Dr. Mantell, as given in a most valuable article on "The Remains of Man, and Works of Art imbedded in Rocks and Strata, as illustrative of the connexion between Archæology and Geology," recently published in the *Archæological Journal*, Vol. VII., p. 343 :—

"Of the extinct terrestrial mammalia of the British Isles, the gigantic Deer, commonly known as the fossil Irish Elk, is one of the most remarkable, from its magnitude and the abundance and excellent state of preservation of its remains. This noble animal was ten feet in height from the ground to the top of its antlers, which are palmated and measure fourteen feet from the extremity of one horn to the other. The bones of the Irish Elk occur in the beds of marl which underlie the peat-bogs, and are generally very perfect, being stained more or less deeply by tannin and iron, and sometimes partially incrustated with a pale blue phosphate of iron: even the marrow occasionally remains in the state of a fatty substance, which will burn with a clear lambent flame. Groups of skeletons have been found crowded together in a small space, with the skulls elevated and the antlers thrown back upon the shoulders, as if a herd of deer had fled for shelter, or been driven into a morass, and perished on the spot. Skeletons of Mastodons have been found in the United States in like circumstances; and very recently remains of the colossal struthious birds of New Zealand, the *Moa* or *Dinornis*, have been discovered by my eldest son, Mr. Walter Mantell, in a morass under similar conditions.

* See also the *Journal of the Geological Society of Dublin*, Vol. I., p. 20.

"Stone hatchets and fragments of pottery have been found with the bones of this creature (the Irish Elk), under circumstances that leave no doubt of a contemporaneous deposition. In the County of Cork, the body of a man, in good preservation, the soft parts being converted into adipocire, was exhumed from a marshy soil, beneath a peat-bog eleven feet thick; the body was enveloped in a deer-skin of such large dimensions, as to lead to the conclusion that it belonged to the extinct Elk. (Jamieson's Translation of Cuvier's Theory of the Earth).

"A rib of this animal has been found in which there is a perforation evidently occasioned by a pointed instrument while the individual was alive; for there is an effusion of callus or new osseous substance, which could only have resulted from a foreign body having remained in the wound for a considerable time; such an effect indeed as would be produced by the head of an arrow or a spear.*

"Human bones have likewise been found associated with the remains of the extinct gigantic wingless birds (the *Moa* or *Dinornis*) of New Zealand, under circumstances that appear to leave no doubt of their having been contemporaneous; but as the extinction of this family of colossal bipeds, like that of the Dodo, probably took place but a few centuries ago, those remains of man and works of art that are associated with the Irish Elk, may be regarded as by far the most ancient vestiges of the human race hitherto discovered. For although Indian arrow-heads and pottery have been dug up from the alluvial clay containing the bones of Mastodons, in the United States of North America, yet the evidence on this point is not conclusive. The same remark applies to the account of human crania having been found in the ossiferous caves of the Brazils, and with bones of the extinct gigantic Edentata of the Pampas.

"The facts brought forward in the course of this argument, demonstrate the existence of Man at that remote period when the Irish Elk and other extinct species and genera of terrestrial mammalia, whose remains occur in the superficial alluvial deposits, inhabited the countries of Europe; and as the Irish Elk was contemporaneous with the Mastodon, Mammoth, and the Carnivora of the caverns, it seems not improbable that sooner or later human remains may be discovered coeval with the bones of those animals."

* A species of Ox (*Bos longifrons*) now extinct, was unquestionably an inhabitant of Britain during the Roman period, for its horns and bones have been found in several places associated with Roman remains; as at Colchester in 1849.—Vide *Archæological Journal*.

ADDENDUM.

Page 229, after last line add—

Since the foregoing was in print I have been informed by the Rev. James Graves, that Ledwich has committed a twofold mistake in stating that the "*Sacri Lus*" was lost, and that the poems were composed by the young gentlemen of Kilkenny College. The volume in question is still to be found in Primate Marsh's Library, Class K. 3. Tab. 5. No. 9; and is entitled "*Sacri Lus* *In Vsum* Scholæ Kilkenniensis. Dublinii: Typis Regiis, & Venum dantur apud Josephum Wilde. c1o locL. * * *". The date is defective, having been partly cut away by the binder. The book is in small quarto, and is imperfect, ending at p. 64; it consists of Latin poetry in elegiac measure, chiefly on Scripture subjects. On the fly-leaf is written, in an old hand, "Daniel Mead, ex dono Geo. Pigott." On the title, "Mich. Jephson"; whose library was purchased by Primate Marsh.

CORRIGENDA.

- p. 117, l. 8, for "Anglesea" read "Anglesea".
- p. 133, l. 27, for "these" read "those".
- p. 142, l. 34, for "of" read "of".
- p. 148, note, l. 1, after "Phœnician" dele .,
- p. 157, l. 17, for "*Muillend*" read "*Muilend*".
- ib., l. 24, for "*Maelodron*" read "*Maelodran*".
- p. 164, l. 11, for "*Muilenu*" read "*Muilenn*".
- p. 174, l. 35, for "connection" read "connexion".
- p. 177, l. 9, for "*barry of four*" read "*four barrulets*".
- p. 182, l. 27, for "Edward" read "Edmond".
- p. 187, l. 31, for "twenty-four" read "fourteen".
- p. 191, l. 27, after "of" insert "the".
- p. 192, l. 37, after "tenure" dele .,
- p. 193, ll. 44, 45, for "two trefoil-headed niches" read "a shallow canopy".
- p. 195, ll. 14, 22, for "Sugard" read "Ingard".
- p. 198, l. 8, for "acre" read "Loftus acre".
- ib., l. 18, for "Ballymagin" read "Ballymagir".
- p. 200, l. 9, after "rain" dele .,
- p. 213, l. 39, for "meta" read "metal".
- p. 216, l. 34, for "Vol. I." read "Vol. II".
- ib., l. 35, for "*luaned*" read "*luued*".
- p. 222, l. 15, for "magnificent" read "magnificent".
- p. 240, l. 39, after "brothers" dele .,
- p. 260, l. 32, for "of Nassau" read "daughter of the first Duke of Beaufort".